Evaluation of Efficacy Persian Shallot (Allium hirtifolium, Boiss) Aqueous Extract on Mouth Bacterial Count Compared with Chlorhexidine Mouth Rinse

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Background & Objectives: This study attempted to compare Persian shallot aqueous extract with commercially available chlorhexidine mouth rinse with respect to their anti-microbial activity on salivary bacterial counts.

Methods: Three groups of 10 volunteers with a healthy oral status, were randomly enrolled. Using sterile water as negative control, standard test group using 0.2 % chlorhexidine as standard control and Persian shallot aqueous extract for test group. A single mouth rinse lasting 15 s of each mouth rinse was employed. Salivary bacterial counts were obtained by collecting unstimulated saliva samples at the beginning before rinsing for measurement of baseline count and 1, 5 and 24 h after rinsing with the assigned solution. Analysis of variance and Bonferroni post hoc tests were used to evaluate significant differences among groups.

Results: No significant differences among the allocated groups were detected at baseline. Chlorhexidine produced more significant reduction of salivary bacterial count relative to both shallot and distilled water control at 1 h. In addition a significant difference at 1 h was also detected between shallot extract with distilled water. However, at 5 h and 24 h there were significant lower bacterial count among shallot-treated compared with chlorhexidine and distilled water groups.

Conclusion: The results of this study suggest that Persian shallot extract has more persistent inhibitory action than chlorhexidine mouth rinse lasting up to 24 h.

Keywords: Allium hirtifolium; Mouth Bacteria; Chlorhexidine